

# **MA DEP Waste Site Cleanup**

## **Audit and Enforcement Update**

### **1996 Compilation**

This column represents what DEP hopes to be the beginning of a cooperative effort with the LSPA to disseminate information regarding DEP's Bureau of Waste Site Cleanup's (BWSC's) audit and enforcement efforts. This first column catalogs the results of BWSC audits and indicates future trends in DEP enforcement. Future columns may compare a series of audits that deal with a particular issue and discuss general issues regarding audits. Please direct questions regarding specific audit or enforcement actions to the appropriate BWSC Regional Engineer or Audit Section Chief.

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#### **January 1996**

##### **Audit Findings**

This column reports on 15 audits and compliance inspections BWSC completed between November 1, 1995 and November 31, 1995. Audit findings of particular significance include:

- 1.A property owner submitted a waiver completion statement for a release from a diesel fuel UST and underground lines discovered in 1989. In 1995, the owner found diesel fuel contamination above reportable concentrations while replacing the pump island. BWSC determined that the waiver completion statement failed to demonstrate that a condition of no significant risk existed and required the 1989 releases to be further assessed pursuant to the deadlines for the 1995 release (Marlborough, 2-0908 and 2-10881, November 6, 1995).
  - 2.A Class B-1 RAO for a property adjoining Marblehead Harbor considered lead and TPH contamination levels to be at background. For lead, BWSC found that urban background lead levels from Brookline, Cambridge and Somerville should not be used to establish background for this site. For TPH, BWSC found that TPH samples of locations near the site had not been shown to be "ubiquitous" in the vicinity of the site because they were collected from fill material. To eliminate those deficiencies, the owner could: (1) better demonstrate that contaminant levels are at or below background [by using more representative studies or samples], (2) establish unrestricted use poses no significant risk, or (3) place an AUL on the entire property. (Marblehead, 3-4472 and 3-11102, November 7, 1995).
  - 3.A response action purged a monitoring well of fifty-five gallons in an attempt to remove two inches of NAPL. Three months later, the owner filed a Class A-2 RAO. A BWSC site inspection found that a sheen continued to be present at that well. BWSC asked that the well be gauged over three consecutive months to establish that the NAPL does not recur. (Haverhill, 3-0866, November 24, 1995).
  - 4.A leak from an UST resulted in two feet of NAPL and elevated BTEX vapor levels in soil below a building next to the UST. The risk characterization for the Class A-2 RAO failed to consider data from a soil gas survey indicating gasoline vapors existed below the building. BWSC recommended that either the risk characterization be modified to include the soil gas data or that indoor ambient air samples be taken. (Brockton, 4-1217, November 30, 1995).
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## February 1996

### Audit Findings

This column reports on 20 audits and compliance inspections BWSC completed between December 1, 1995 and December 31, 1995. Audit findings of particular significance include:

1. A Tier Classification for a release from a service station UST failed to consider: (a) high BTEX levels and NAPL near residences and (b) impacts to surface water and wetlands. BWSC required a revised classification. (Hingham, 3-0187, December 4, 1995).
2. A residential UST leaked resulting in soil TPH levels exceeding the Upper Concentration Limits. The A-2 RAO failed to: (a) document if soil excavation had adequately removed the release and (b) show that the private drinking water well for the residence had not been impacted. (Topsfield, 3-2088, December 15, 1995).
3. An LSP Evaluation Opinion concluded that a Location to Be Investigated was not a disposal site where a release had occurred. BWSC subsequently received information from a downgradient property owner indicating that a release from the location had migrated to his property. BWSC sent a Notice of Responsibility requiring response actions to address the potential release. (Wilmington, 3- 1787, December 14, 1995).
4. BWSC found that: (a) one downgradient monitoring well and (b) photoionization detector (PID) readings did not adequately support an A-2 RAO for a release associated with a septic system for a commercial property. BWSC required an Audit Followup Plan to be submitted. (Norfolk, 3-2942, December 18, 1995).
5. An LSP Evaluation Opinion for a Non-Priority site improperly concluded that the location was not a disposal site. PID readings exceeded 200 ppm and the extent of contamination had not been established. The Notice of Noncompliance required the opinion to be resubmitted. (Williamsburg, 1-0243, December 19, 1995).
6. A leak of fuel oil at a residence resulted in an oil stain and a mild oil odor in a basement. BWSC required the A-2 RAO to be revised because: (a) vapor impacts had not been addressed, (b) soil contamination exceeded method 1 numbers and (c) an AUL had not been used although the risk characterization assumed limiting use. (Harwich, 4-11348, December 28, 1995).
7. A bio-reactor treated soil contaminated by rinsewater from a weed control spray truck. Soil sampling used to support a Class A-2 RAO failed to analyze for dioxin contained in the spray. BWSC required: (a) soil sampling for dioxin, (b) modification of the risk assessment or use of an AUL, (c) re-use, containment or disposal of soil from the bio-reactor and (d) a new RAO to replace the A-2 RAO, following achievement of a permanent or temporary solution. (Westfield, 1-0238, December 29, 1995).

## Your Input Wanted: Audit Forums

BWSC plans to hold regional forums with LSPs to foster communication between LSPs and auditors. These informal discussions will cover the audit process, audit findings and follow-up. BWSC wants your input on the format, content and timing of the forums. Please complete the following survey.

A. Would you attend a forum with BWSC auditors? Yes\_\_\_\_\_ No\_\_\_\_\_

B. Which regional forum would you attend?

WERO\_\_\_\_\_CERO\_\_\_\_\_NERO\_\_\_\_\_SERO\_\_\_\_\_

C. Format: I prefer:

Audit Case Studies \_\_\_\_\_

Issues of from one Subpart \_\_\_\_\_

Question and Answer \_\_\_\_\_

Small Group Discussions: \_\_\_\_\_

Other:\_\_\_\_\_

D. Pick 3 Areas Which You Would Like the Forums to Cover:

Sampling \_\_\_\_\_ Remedial Waste \_\_\_\_\_ Im. Hazards/IRAC \_\_\_\_\_

RAMs \_\_\_\_\_ NRS \_\_\_\_\_ Extent of Contamination \_\_\_\_\_

Sources \_\_\_\_\_ Receptors \_\_\_\_\_ Exposure Point Conc. \_\_\_\_\_

Method 1 \_\_\_\_\_ Method 2 \_\_\_\_\_ Method 3 \_\_\_\_\_

RAO A \_\_\_\_\_ RAO B \_\_\_\_\_ RAO C \_\_\_\_\_

AULs \_\_\_\_\_ Audit Process \_\_\_\_\_ LSP Evaluation Opinions \_\_\_\_\_

Other:\_\_\_\_\_

E. Time: Which time would be most convenient for you:

9 - 11 am\_\_\_\_\_ 3 - 5 pm\_\_\_\_\_ 5 - 7 pm\_\_\_\_\_ 6 - 8 pm \_\_\_\_\_

F. How Frequently Should these Forums Be Held?

Quarterly\_\_\_\_\_ Semi-annually\_\_\_\_\_ Annually\_\_\_\_\_

F. Would you attend a continuing education class on the audit process, audit findings and follow-up if one were offered?

Yes\_\_\_\_\_ No\_\_\_\_\_

Return survey to:

Stephen Winslow, Audit & Enforcement Coordinator

DEP, One Winter St., Boston MA 02148

or via email: [swinslow@state.ma.us](mailto:swinslow@state.ma.us)

## Consent Orders

1. A PRP group agreed to: (1) accept a Tier IB Transition Permit, (2) submit the results of a RAM pilot study, (3) prepare a remedial design plan, if the RAM proves feasible, and (4) pay over \$400,000 in DEP costs. (Leicester, 2-0074, December 13, 1995).
2. A company agreed to pay a \$16,500 penalty after failing to: (1) timely file IRA Plans and Tier Classifications, (2) employ an LSP to oversee the IRAs and (3) notify the Department of a release of oil exceeding reportable quantities. (Framingham, 3-10252 & 3-12270, December 26, 1995).
3. DEP received a \$4100 penalty from a partnership that failed to notify of soil concentrations of PCBs above reportable concentrations within 120 days of obtaining knowledge of the release (Chelsea, 3-12790, December 21, 1995).
4. A RAM approval required monthly soil and groundwater monitoring reports to be submitted to DEP. DEP received a \$4000 penalty from a company that failed to follow those conditions and requirements of a subsequent Notice of Noncompliance (Charlestown, 3-10775, January 3, 1996).

## Waste Site Cleanups and Wetlands

A recently completed study of compliance with wetland requirements at 21E spills and sites in DEP's Northeast Region discovered the following successes and problems:

LSPs have been doing a good job in obtaining required wetland permits when conducting Release Abatement Measures.

Immediate Response Actions in wetlands frequently fail to have timely wetland approvals. For spill cleanups in wetlands orally-approved by BWSC, be sure the cleanup contractor has requested a Wetlands Emergency Certification from the local conservation commission within 24 hours. Work can proceed while the conservation commission and DEP consider the request. After 60 days from oral approval of the IRA, the certification expires and a full wetlands permit must be obtained.

Wetlands have been inadvertently overlooked. For instance, some Tier Classifications failed to consider open water or fish habitat "wetlands". 100 year floodplains and wooded swamps in any season can also be easily missed.

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## March 1996

### Audit Findings

BWSC completed 9 audits and between December 28, 1995 and January 31, 1996. Audit findings of particular significance include:

1. A Tier II classification failed to consider a tributary to the Brockton Reservoir that is within 400 feet of the site. BWSC requested the Tier Classification be resubmitted. (Avon, 4-10381, December 28, 1995).
2. An opinion that an RAO had been achieved for a former tannery site violated the MCP. The site investigation failed to adequately evaluate potential source areas such as sludge lagoons and other disposal areas. Surficial soil samples had not been taken. Groundwater flow and contamination had not been adequately characterized; three of four monitoring wells were screened over lengths of 25 feet or more. (Woburn, 3-0482, January 4, 1996).
3. An owner discovered staining near a former drum storage area. The owner had 10 cubic yards of soil removed then filed an RAO A-1. BWSC found the extent of contamination and site characteristics had not been adequately assessed. Confirmatory soil samples had not been taken after the soil removal. Groundwater flow had not been determined although the release occurred on the border of an Interim Wellhead Protection Area for a public drinking water supply. (Natick, 3-3344, January 16, 1996).
4. An owner removed USTs containing gasoline and diesel. The Class B-1 RAO for the site calculated exposure point concentrations by averaging samples from both UST excavations. BWSC found samples from each UST excavation should not have been averaged together. The exposure point concentration for the gasoline UST exceeded the Method 1 numbers so the Class B-1 RAO was not appropriate. (Wilmington, 3-10067, January 29, 1996).
5. An opinion failed to adequately explain the contradiction between field observations and screening that soil was "grossly" contaminated and analytical results that indicated backfilled soil was not contaminated. (Danvers, 3-12052, January 29, 1996).

### Consent Order

The Department penalized a motor oil service franchise \$1800 for failing to timely notify the Department when the legs of a storage tank collapsed releasing motor oil onto a parking area and into the Blackstone River. (Worcester, 2-10979, January 25, 1996).

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## April 1996

### Audit Findings

BWSC completed 13 audits and between January 22 and February 29, 1996. Audit findings of particular significance include:

1. Releases of fuel oil and chlorinated solvents were encountered during the removal of an UST beside a building. BWSC requested the revision of the LSP evaluation opinion that a Class A or B RAO had been achieved since: (1) the contamination beneath the building represents a separate exposure point that should not have been averaged in with samples from the other sidewalls and (2) downgradient groundwater wells should have been installed to confirm that soil under the building was not a source of chlorinated solvents. (Salem, 3-0427, February 5, 1996).
2. A fuel oil tank leaked into the water well pump beneath a vacation residence. Residual soil contamination beneath the building exceeded Method 1 levels for non-restricted use. BWSC found the Class A-2 RAO violated the MCP and required that further action be taken to: (1) determine if indoor air presents a risk and (2) apply an AUL, submit a Method 3 Risk Assessment or remove the soil. (Truro, 4-10336, February 20, 1996).
3. A state agency filed a Class B-1 for a location that includes a former wastewater treatment plant. BWSC requested an audit followup plan to assess the sludge drying beds (Belchertown, 1-10541, February 27, 1996).
4. A former oil storage facility abutted by a junk equipment yard is being converted to residential use. Tests pits had uncovered oil filters, auto parts and tarry substances. BWSC found that further soil sampling for constituents of waste oil, such as metals, PAHs and PCBs, needs to be conducted to support the Class A-2 RAO for the property. (Wilmington, 3-2158, February 29, 1996).

### Consent Order

1. The Department penalized a gasoline station \$3500 for failing to timely notify the Department of a release that resulted in vapors in nearby residences and explosive levels in storm drains. The station also agreed to install a vacuum-assist dispenser system. (Marlborough, ACOP-CE-96-3004/9006-7, February 15, 1996).
2. The Department penalized a fuel oil service delivery company \$2000 for failing to timely notify the Department when a new above ground storage tank discharged oil to a lawn and dirt road. (Sandwich, 4-11220, February 21, 1996).

### Forums

BWSC will hold regional forums to present and discuss audit case studies. The case studies will cover areas for which LSPs expressed the most interest in the recent survey including assessing the extent of contamination, LSP evaluation opinions and exposure point concentrations. The forums will be held as follows:

Location	Date/Time	DEP Contact
Lakeville:	May 30 3 - 5 pm	Joseph Kowal 508-946-2872
Springfield:	May 23 3 - 5 pm	Cathy Wanat 413-784-1100
Woburn:	May 16 9 -11 am	Patricia Donahue 617-932-7730
Worcester:	May 23 9:30 - 11:30 am	Mary Gardner 508-792-7653

Space may be limited. RSVP with the DEP contact person to reserve a set and confirm the time and date.

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## May 1996

### Audit Findings

BWSC completed 14 audits in March of 1996. Audit findings of particular significance include:

1. An UST released an unknown volume of #2 fuel oil in an urban area. BWSC did not agree with the conclusion of the Waiver Completion Statement that a permanent solution had been achieved. Continued existence of separate-phase product presented an unacceptable risk to the public welfare and the environment since: (a) the volume of oil released was unknown, (b) the level of product recently increased, and (c) the product migrated 60 feet in the past two years. (Springfield, 1-0306, March 4, 1996).
2. A Class B-1 RAO for a former metal fabrication shop violated requirements of the MCP since concentrations of dieldrin in the soil exceeded the applicable Method 1, S-1 standards. BWSC requested further surficial soiling sampling since: (a) levels of surficial contamination were inappropriately inferred from soil samples at depth and (b) the extent of dieldrin contamination had not been determined. (Pittsfield, 1-0709, March 18, 1996).
3. An LSP Evaluation Opinion for a former service station concluded that the location was not a disposal site where a release occurred. BWSC concluded that a release as defined by 310 CMR 40.0300 had occurred since jar head space and analytical data showed that a reportable release occurred. (Newton, 3-2212, March 18, 1996).
4. A BWSC inspection found that paving required as part of an AUL had not been completed (Chicopee, 1-10413, March 18, 1996).
5. BWSC requested that a Class A-1 RAO for a transformer release be resubmitted. A sample indicating the presence of 230 ppm of #6 fuel oil did not represent background. (Spencer, 2-0010014, March 19, 1996).
6. Groundwater recovery reduced the thickness of separate-phase fuel oil at a site from 1.6 feet to less than 1/16 of an inch over a 7 year period. The Waiver Completion Statement for the location deficient failed to include downgradient groundwater and soil data. BWSC requested that samples be taken. (Norwood, 3-0029, March 21, 1996).
7. A Tier II NRS failed to score a nearby brook as fish habitat. BWSC required the revision of the NRS score and a Tier IB permit. (Danvers, 3-12609, March 25, 1996).
8. 150 tons of soil contaminated with MEK and acetone were backfilled after the removal of an UST. Remedial actions to bio-remediate and/or air sparge the soil were never fully implemented. BWSC requested additional soil sampling to support the Class A-2 RAO. The latest sampling in 1992 had indicated that levels of MEK exceeded the S-3 soil standards and no recent sampling had been done. (Salem, 3-3959, March 28, 1996).

### August 2, 1996 Deadline

August 2, 1996 is the deadline to file an LSP Evaluation Opinion for Locations to Be Investigated (LTBIs), Unclassified Sites and Non-priority Sites without Waivers listed by the Department between April 15, 1989 and January 15, 1991. BWSC has been reviewing its files for these locations and updating PRP addresses. BWSC will be sending letters to PRPs reminding them of the approaching deadline sometime in May. BWSC will be sending letters indicating that no further DEP action is planned where the information available to BWSC indicates current release conditions would not likely exceed reportable quantities or concentrations.

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## **The Audit and Enforcement Update was not published in June, July & August.**

### **September 1996**

#### **Audit Findings**

BWSC completed 16 audits May, 17 audits in June and 13 in July of 1996. Audit findings of particular significance include:

#### **May 1996**

1. Four USTs were removed from a property used for bulk storage of fuel oil since the 1930's. Recent and 6-year old groundwater analysis showed decreasing levels of VOCs but had not tested for TPH. The BWSC auditor observed a strong petroleum odor in one monitoring well during the field inspection. BWSC required additional samples for TPH in groundwater to support the Class A-2 RAO. (Springfield, 1-0182, May 9, 1996).
2. The Town of Dover closed a wellfield in 1990 upon discovery of MTBE and EDB contamination. The Town subsequently investigated USTs at the nearby Town Highway Department property as a potential source of the contamination. A round of groundwater sampling in July 1995 indicated the presence of EDB at the property while a September 1995 round did not. BWSC found the Class B-1 RAO failed to consider the property to be in a GW-1 area. Also, BWSC did not accept the LSPs explanation that the July 1995 EDB cross-contaminated the since EDB did not contaminate other samples. (Dover, 3-3865, May 21, 1996).
3. A property owner installed a Soil Vapor Extraction system after finding groundwater contamination during the removal of three USTs used for gasoline storage. The Class A-2 RAO relied on single soil and groundwater samples to conclude the achievement of a level of no significant risk. BWSC requested additional soil and groundwater sampling be done. (Rowley, 3-10225, May 23, 1996).
4. A local housing authority filed a consultant-of-record statement for an area formerly containing an UST. BWSC requested that the authority provide additional documentation, such as records of confirmatory samples or some other accounting of the levels of petroleum in remaining soil. (Lowell, 3-0573, May 23, 1996).
5. A property owner filed a Class A-2 RAO after removal of three USTs from a property located within 1000 feet of a public water supply well. Nearby wells indicated depths to groundwater as shallow as 2 feet. Water collected at the bottom of the three UST excavations indicated the presence of TPH. The Class A-2 RAO concluded that tank excavations collected rainwater and that contamination did not impact groundwater. BWSC requested groundwater investigation be done that could include samples from nearby monitoring wells or installation of additional wells. (Rowley, 3-10225, May 23, 1996).

#### **June 1996**

1. Groundwater samples by BWSC exceeded GW-1 cleanup standards. BWSC requested two additional groundwater sampling rounds to further evaluate whether a level of no significant risk exists. (Winchester, 3-0667, June 11, 1996).
2. BWSC issued a Tier IB permit to a condominium complex formerly the site of a chemical plant. Free phase oil from the site regularly leaks into Beverly Harbor. The condominium association declined to sign the permit and instead indicated that it would continue current response actions. BWSC issued a Notice of Noncompliance to the condominium association for failing to include a status report stating whether continued response actions would achieve a permanent solution. (Beverly, 3-0234, June 12, 1996).
3. Owners filed DPS opinions for properties located next to sources of petroleum (e.g. a former fuel depot). BWSC requested that the owners further evaluate petroleum product storage areas on their properties



(e.g., where above ground storage tanks had been removed). (Lowell, 3-12274, June 24, 1996; Everett, 3-13901, June 24, 1996).

4. Lead contamination resulting from a neighboring lead smelter could not be considered "natural" background. A DPS opinion could not apply to the lead contamination (Everett, 3-10118, June 24, 1996).
5. BWSC received a request to conduct a RAM to remove petroleum contaminated soil as a continuation of an LRA. BWSC found the Class A-2 RAO: lacked any sampling plans, inappropriately relied on composite samples, lacked analysis of groundwater and for VOCs. Additional site work will be completed under RTN 3-2333. (Hingham, 3-12098, June 26, 1996).
6. A no further action report concluded that a location had naturally high concentrations of barium, chrome and lead in the groundwater. BWSC requested that additional groundwater samples be taken, filtered in the field and analyzed to support the no further action recommendation (Palmer, 1-0469, June 27, 1996).

#### July 1996

1. Monitoring wells were not installed during a Phase I investigation to support a Tier II classification. Also, the Phase I report did not adequately describe the type of water supplies wells near the site. The property owner installed monitoring wells during the audit. BWSC required resubmission of the Tier Classification. (Lunenburg, 2-10023, July 11, 1996).
2. An owner filed a Class A-3 RAO for rubber products manufacturing plant used since 1890. The assessments did not investigate a former cesspool, cooling water pond, a drainage ditch, a wastewater sluiceway and one portion of the property. The Method 3 risk assessment failed to consider TPH contamination and risk to children of drinking contaminated groundwater. BWSC requested additional assessment, revision of the risk characterization and more extensive investigation of TPH that may be having an impact on the Zone II of public water supply. (Holbrook, 3-1837, July 12, 1996).
3. Gasoline released from either USTs or piping migrated into a culvert located under a site then into a stream. The site also lies within the Zone II's of two public water supplies. Assessment done during the audit found elevated levels of gasoline constituents in the soil and groundwater. BWSC found the assessment inadequate to support a "no further action" recommendation and required the submission of a Tier I permit. (Douglas, 2-0284, July 12, 1996).
4. Gasoline from a service station previously created odors in a nearby residence. A groundwater recovery system has operated at the site since 1987. Groundwater monitoring during the operation of the system showed substantial decreases in groundwater contamination allowing a Class A-2 RAO to be filed. BWSC requested that the indoor air in the residence be monitored to confirm the elimination of vapor impacts. (Beverly, 3-0735, July 26, 1996).

#### Penalties and Orders

##### May 1996

1. BWSC issued \$2000 penalties to three separate companies that failed to notify DEP of releases of oil or hazardous materials and to take Immediate Response Actions. (Southwick, 1-11328, May 6, 1996; Holliston, 2-11186, May 9, 1996; Westborough, 2-11165, May 9, 1996).
2. Releases from USTs at gasoline service station caused vapors in the basements of adjacent buildings. Investigations conducted by the owner discovered NAPL greater than 1/2 on the groundwater. The owner failed to adequately conduct response actions to address the impacts from the releases. BWSC entered into a consent order requiring the owner to conduct IRAs to address the release and pay a penalty of \$5700. (North Andover, 3-2402 & 3-13286, May 24, 1996).

June 1996

- 1.BWSC issued a \$750 penalty to a property owner who failed to notify DEP of releases of oil that exceeded 72-hour reporting (Southboro, 2-11237, June 18, 1996).

July 1996

- 1.BWSC issued a \$2000 penalty to a company that failed to notify DEP of a release of oil from a delivery truck and failed to take Immediate Response Actions. (Easton, 2-11131, July 26, 1996).
  - 2.BWSC issued a \$750 penalty to a trucking company that failed to notify DEP of releases of oil that exceeded 2-hour reporting requirements (Westboro, 2-11243, July 1, 1996).
  - 3.A realty partnership entered into a Consent Order to conduct IRAs to respond to PCE and TCE contamination that threatens two public water supply wells. (Natick, 3-3672 & 3-11580, July 22, 1996).
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## October 1996

### Audit Findings

BWSC completed 12 audits in August. Audit findings of particular significance include:

1. BWSC issued a Notice of Noncompliance to an owner for scoring a firearm manufacturing facility a Tier II site. Numerous investigations identified releases of oil and/or hazardous material including: (i) contaminated wetlands fill, (ii) drum disposal, (iii) hazardous waste tank overfills, (iv) fuel oil leaks resulting in NAPL greater than 12 inches and (v) discharges to a pond that was stocked with fish. Contaminants included waste oil, chlorinated solvents and metals. The audit found that Numerical Ranking System score deductions should not have been based on: (a) an Immediate Response Action for a release to the pond that had not addressed other discharges to the pond, (b) the ongoing operation of a recovery system to recover NAPL, and (c) the intended use of the pond for fire protection rather than for fish habitat. (Springfield, 1-0202, August 16, 1996).
2. BWSC found a Class B-1 RAO in noncompliance and required an audit followup plan. Rubber products manufacturing occurred at the site for 125 years. The former owner removed nine USTs in 1986, including USTs containing #2 and #6 fuel oil, waste oil and TCE. The Town of Easthampton and an adjoining private school purchased portions of the site following the filing of the RAO. A pond used by the public for fishing and recreation abuts the site. The BWSC auditor observed seven pipes that extended into the pond that were not previously identified. Surface water sampling was limited and no sediment samples were taken. Black oil-stained soils in a former mill room area (now under demolition debris) have not been fully investigated. Soil TPH values up to 150,000 ppm exist, but the highest value was not included in the risk characterization. The audit followup plan required the former owner to address: (a) sediments and water in the pond, (b) soil under demolition debris, and (c) contamination in the former mill room. (Easthampton, 1-0728, August 26, 1996).
3. An owner filed a Class B-1 RAO for a site from which highly corroded #6 fuel oil USTs had been removed. Groundwater samples taken in 1995 from one of the eight wells installed showed several PAH concentrations above the Method 1 GW-3 standards. Two subsequent rounds of sampling of that one well indicated that the groundwater was in fact below the Method 1 GW-3 standards. Groundwater samples taken in 1990 indicated the presence of mercury above Method 1 GW-2 standards. BWSC requested that an additional round of groundwater sampling be done for mercury, nickel and PAHs using filtered samples to confirm that EPCs are in fact below Method 1 cleanup numbers. (Worcester, 2-10999, August 30, 1996).

### Transition Site Screening Project

In the spring, DEP screened locations and sites subject to the Transition Provisions of the MCP to set priorities for future enforcement. One purpose of the screening was to identify locations and sites not likely to warrant DEP enforcement, based upon available (and usually limited) information on release and site conditions. The screening sought to identify locations and sites where: (a) release conditions were below Reportable Quantities or Reportable Concentrations, (b) removal of a fuel/waste oil release occurred and there is no indication of significant exposures, or (c) low residual contaminant concentrations exist based on field screening or analytical tests after an oil release. Based on those criteria, 435 locations and sites, about 15% of the total screened, do not appear to warrant further DEP enforcement actions.

DEP is now considering removing locations and sites that do not appear to warrant further DEP enforcement actions from the DEP Transition list. For locations and sites that DEP may delist that were subject to the August 2, 1996 deadline, DEP issued a letter that it will forgo enforcement of the requirement to file an LSP Evaluation Opinion until delisting regulations go into effect. For the locations and sites subject to the August 2, 1995 and August 2, 1997 deadlines, DEP will issue letters after the regulations have been promulgated sometime in early in 1997.

While such locations and sites that meet DEP's criteria included releases that do not appear to exceed Reportable Concentrations, parties cannot assume that all locations and sites that meet the criteria meet MCP closure requirements. The proposed regulations do not exempt these locations and sites from reporting should a reportable condition be discovered in the future. BWSC advises parties who desire more certainty regarding these locations and sites to obtain an opinion from a Licensed Site Professional.

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## November 1996

### Audit Findings

BWSC completed 6 audits in September. Audit findings of particular significance include:

1. BWSC found violations in a Tier II Classification and required the site to be reclassified and permitted. Naphthalene contamination had caused odors and should have been scored as a potential air exposure. Mitigating deductions for Ecological Populations should not have been made since: (a) naphthalene had been detected in sediments, and (b) contamination did in fact exist within 500 feet of Protected Open Space (Cambridge, 3-0277, September 20, 1996).
2. A 1983 release from a gasoline UST caused vapors in nearby residential basements and required some residents to switch from private wells to public water supplies. A pump and treat system operated at the site until 1991. The former owner filed a Class A-2 RAO for the site in July 1995. BWSC determined that further actions were needed to support the RAO and that the assumption that no private wells remained in the area was incorrect. BWSC also determined that GW-2 and GW-3 groundwater categories applied to the site in addition to GW-1. The BWSC auditor inspected the site and found an abandoned waste oil UST which the new owner subsequently removed. BWSC required during the audit that the former owner test a private well and monitoring wells in the release area (adjacent residential neighborhood) that had not been sampled as part of the RAO. BWSC found that one test indicated dissolved lead contamination exceeded GW-1 standards in one private well and requested additional sampling to determine if lead was in fact present above GW-1 standards. BWSC also required that a Method 2 or 3 risk characterization be performed in addition to the Method 1 risk characterization on gasoline compounds detected in recent sampling that do not have Method 1 standards. Neighborhood residents sent a letter to the former owner and their LSP, with a copy to BWSC, requesting clarification on past and present actions involving the clean-up, current BWSC regulatory requirements and requested a public meeting. BWSC responded to the letter addressing the concerns raised and offered to participate in a meeting if residents felt a meeting was still necessary. (Wilbraham, 1-0242, September 20, 1996).

### RAM Plans for excavation (John Fitzgerald, BWSC-NERO)

Many LSPs can improve their RAM plans to excavate remediation wastes. These plans often underestimate the amount of soil expected to be removed. Once removal starts and the LSP discovers more soil needs to be removed, they call DEP to seek an oral modification that the MCP does not allow. Moreover, the MCP limits soil removals during RAMs to 1500 cubic yards unless a client certifies that it can afford to dispose of all the dirt expected to be removed. LSPs have had problems when they proposed a RAM less than 1500 yd<sup>3</sup>, and then call on the phone wanting to remove more.

So, the bottom line is that LSPs should be submitting RAM plans incorporating contingencies if more soil must be removed. Don't low ball estimates. In fact, submit plans with "up to" estimates, to give yourself plenty of room. If the "up to" estimate exceeds 1500 yds, then submit the required financial ability statement.

### Consent Orders

1. BWSC SERO amended a Consent Order with an electric utility to allow the utility to proceed with work under a permit (Attleboro 4-0725, September 13, 1996).
  2. BWSC NERO entered into a Consent Order with the MDC for the assessment and cleanup of the Indian Line Farms site in Canton (Canton, 3- 0283, September 23, 1996).
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## December 1996

### The Release That (Hopefully) Will Never Reoccur

BWSC audited a RAO for a release of ammonia at an industrial facility and found no problems. During the audit site inspection the company made a detailed presentation of how the release was handled. Auditors from DEP's Lakeville office gladly reported that the company's presentation also included steps the company has taken to prevent a similar release from occurring in the future. (Attleboro, 4-10130, October 16, 1996).

### Audit Findings

BWSC completed 23 audits in October. Sixteen of the 23 audits found that further field work was not required. Seven audits found field work was required including:

1. An abutter filed a DPS claiming that the neighboring gasoline station was the source of contamination on their property. BWSC audited the Class A-2 RAO for the gasoline station and requested that the gas station owner better define the extent of petroleum contamination. (Lowell, 3-11986 and 3-1143, October 2, 1996).
2. A BWSC auditor found evidence of surficial petroleum releases on a property owned by a sign company. Soil borings for the property had indicated petroleum contamination to a depth of 5 feet. The sign company owner subsequently withdrew the DPS Opinion for the property (Newton, 3-0172, October 7, 1996).
3. BWSC granted a former tannery property a Waiver under the 1988 MCP. BWSC found that the Waiver Completion Statement violated the 1988 MCP since: (1) additional groundwater monitoring wells had not been installed as the waiver required and (2) groundwater contamination exceeded drinking water standards applicable under the 1988 MCP. Also, the risk assessment should consider chromium contamination at the site to be in the hexavalent form unless conclusive technical evidence shows otherwise. (Woburn, 3-1063, October 7, 1996).
4. Excavations found subsurface soil contamination at a gasoline service station that has operated since the 1930s. The BWSC auditor noted that the station lies at the boundary of the Zone II for a public water supply well. BWSC requested that the owner further delineate groundwater contamination, determine if contamination exists within the Zone II and resubmit the Class A-2 RAO if necessary. (Peabody, 3-4251, October 10, 1996).
5. Chlorinated solvents contaminated private drinking water well. BWSC sent a nearby property owner a Notice of Responsibility based on a previous site investigation that indicated the presence of chlorinated solvents. An automotive repair shop and a dry cleaner previously occupied the property. In response to the NOR, the owner submitted an IRA plan to determine if releases on its property contaminated the private wells. The IRA completion statement concluded that the releases from the property did not contaminate the private wells. BWSC found that the IRA Completion Statement failed to meet the specifications contained in the IRA plan and therefore violated the MCP. (Hingham, 3-0123, October 16, 1996).
6. A town DPW worker observed a strong petroleum odor while installing a water line. BWSC issued a NOR to a nearby gasoline station owner. The owner subsequently removed a 500 gallon fuel oil UST that had holes in it. BWSC found the Class A-2 RAO for the release violated the MCP because the concentration of TPH contamination (34,000 ppm) in soil at bottom of the tank exceeded the applicable Method 1 cleanup standard. (Marshfield, 4-10528, October 25, 1996).
7. Releases of heating oil and perchloroethylene had occurred at a costume company. BWSC found that the Class A-2 RAO for the site violated the MCP since: (1) levels of vinyl chloride in the groundwater exceeded the applicable GW-2 standard, (2) levels of TPH in soil exceeded Method 1 S-1 standards and an AUL had not been implemented, and (3) the extent of the oil and PCE contamination had not been adequately assessed. (Haverhill, 3-3707, October 29, 1996).

#### Evolving VPH/TPH Proposal (John Fitzgerald, BWSC-NERO)

The November 1, 1996 Public Hearing Draft of proposed changes to the MCP indicates that the proposed Method 1 VPH/EPH standards set forth in that draft may be used immediately. Note that the VPH/TPH methodology has evolved significantly since earlier proposals.

August 1995 drafts of the VPH/TPH analytical method considered comparing a single TPH cleanup number to a TPH concentration calculated by discounting the concentrations of aliphatic and aromatic fractions less toxic to humans in proportion to relative Reference Doses. However, further review indicates that pathways and concerns other than human exposure will be the controlling consideration in developing Method 1 standards for a number of these fractions. For this reason, BWSC has dropped the original proposal for a single "weighted" TPH standard. Instead, the proposed regulations contain individual (unweighted) standards for each of the six aliphatic and aromatic fractions.

Laboratories no longer need to report weighted values for VPH and EPH analytical methods. Submittals to DEP relying on the VPH/TPH method should report the data for each fraction, without any adjustment based on reference doses.

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